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SAFETY RULES

As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the machine until you have written Delta Machinery and we have advised you.

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WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

1. FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. KEEP GUARDS IN PLACE and in working order.

3. GROUND ALL TOOLS. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.

4. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "on."

5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

6. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILDPROOF - with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL. It will do the job better and be safer at the rate for which it was designed.

10. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip foot wear is recommended. Wear protective hair covering to contain long hair.

12. ALWAYS USE SAFETY GLASSES. Wear safety glasses (must comply with ANSI Z87.1). Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty.

13. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

14. DON'T OVERREACH. Keep proper footing and balance at all times.

15. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters, etc.

17. USE RECOMMENDED ACCESSORIES. The use of improper accessories may cause hazards.

18. AVOID ACCIDENTAL STARTING. Make sure switch is in "OFF" position before plugging in power cord.

19. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

20. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

21. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

23. DRUGS, ALCOHOL, MEDICATION. Do not operate tool while under the influence of drug, alcohol or any medication.

24. MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.

25. WARNING: The dust generated by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.
1. **WARNING:** Do not operate your scroll saw until it is completely assembled and installed according to the instructions.

2. **IF YOU ARE NOT** thoroughly familiar with the operation of Scroll Saws, obtain advice from your supervisor, instructor or other qualified person.

3. **YOUR Scroll Saw MUST** be securely fastened to a stand or workbench. If there is any tendency for the stand or workbench to move during operation, the stand or workbench MUST be fastened to the floor.

4. **THIS SCROLL SAW** is intended for indoor use only.

5. **MAKE SURE** blade is properly tensioned before operating saw.

6. **MAKE SURE** the blade teeth point downward toward the table.

7. **NEVER** turn the saw "ON" before clearing the table of all objects (tools, scraps of wood, etc.).

8. **DO NOT** cut material that is too small to be safely supported.

9. **AVOID** awkward hand positions where a sudden slip could cause a hand to move into the blade.

10. **ALWAYS** keep hands and fingers away from blade.

11. **DO NOT** attempt to saw material that does not have a flat surface, unless a suitable support is used.

12. **MAKE** "relief" cuts before cutting long curves.

13. **ALWAYS** hold the work firmly against the table.

14. **DO NOT** feed the material too fast while cutting. Only feed the material fast enough so that the blade will cut.

15. **WHEN CUTTING** a large workpiece make sure the material is supported at table height.

16. **USE CAUTION** when cutting material which is irregular in cross section which could pinch the blade before the cut is completed. A piece of moulding for example must lay flat on the table and not be permitted to rock while being cut.

17. **USE CAUTION** when cutting round material such as dowel rods or tubing. They have a tendency to roll while being cut causing the blade to "bite."

18. **NEVER** perform layout, assembly or set-up work on the table while the saw is operating.

19. **TURN OFF** the saw before backing material out of an uncompleted cut.

20. **STOP** the saw before removing scrap pieces from the table.
UNPACKING AND CLEANING

The 15" Scroll Saw is shipped complete in one carton. Carefully unpack the saw and all loose items. Remove the protective coating from the saw table surface. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the table surface with a good quality paste wax.

WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE SCROLL SAW TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU HAVE READ AND UNDERSTOOD THE ENTIRE OWNERS MANUAL.

FASTENING SCROLL SAW TO SUPPORTING SURFACE

Your scroll saw MUST be securely fastened to a stand or workbench using the two mounting holes in the base of the saw. The diagram shown in Fig. 2, illustrates the size and center to center distance of the holes to be drilled in the stand or workbench.

An alternate method of securing the scroll saw to a supporting surface is to fasten the scroll saw base to a mounting board (A) Fig. 3, and "C" clamp the mounting board to the supporting surface, as shown, using two or more "C" clamps (B). The mounting board should be of sufficient size to allow clamping, as shown, and the holes in the mounting board must be countersunk at the bottom so screw heads are flush with bottom surface of the mounting board.

IMPORTANT: If there is any tendency for the stand or workbench to move during operation, the stand or workbench must be fastened to the floor.

ASSEMBLING TABLE LOCK KNOB

Assemble the table lock knob (A), and washer (B) to the hole (C), as shown in Fig. 4. For instructions on tilting and leveling the table refer to the sections TILTING THE TABLE and LEVELING THE TABLE later on in this manual.
ASSEMBLING SCREW, SPRING AND WASHERS TO BLADE HOLDER CLAMP

Assemble the locking screw (A) Fig. 5, two 1/4-inch, flat washers (B) and spring (C) to blade holder clamp (D) as shown. **NOTE**: The screw, spring and washers are used only when cutting with flat-end blades; however, they can be assembled to the machine regardless of the type of blade being used, either pin-type or flat-end blades. If you prefer to use a flat-end blade in place of the pin-type blade which is shipped assembled to the machine, refer to section "Installing And Replacing Flat-End Blades."

ASSEMBLING CHIP BLOWER ASSEMBLY

1. MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.

2. Assemble bracket (A) Fig. 6, to upper arm guard (B) as shown using pan head screw (C) and flat washer (D). **NOTE**: Do not overly tighten hardware as adjustment will be necessary.

3. Align ears of plug housing (E) Fig. 7, with slotted hole in upper arm guard (B) and insert plug housing (E) into upper arm guard (B).

4. Apply light downward pressure to plug housing (E) Fig. 8, and rotate plug housing (E) 90 degrees left or right to lock plug housing into upper arm guard (B).
5. Insert brass pipe (F) Fig. 9, of chip blower assembly into bracket (A) and tighten pan head screw (C). Assemble one end of clear chip blower tube (G) Fig. 4, to end of brass pipe (F).

6. Attach the remaining end of chip blower tube (G) Fig. 10, to plug housing (E).

7. Fig. 11, illustrates the chip blower assembly assembled to the machine.

8. Depending on the thickness of the workpiece, chip blower assembly (F) Fig. 11, can be adjusted for effective chip removal by raising or lowering brass pipe inside bracket (A). Tighten screw (C) after adjustment is made.
CONNECTING SCROLL SAW TO POWER SOURCE

This machine is equipped with 1725 RPM motor and is wired for operation on 115 Volts. **IT MUST NEVER BE CONVERTED TO OPERATE ON 230 VOLTS.**

**WARNING:** THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and 3-hole receptacles that accept the tool's plug, as shown in Fig. 12.

Repair or replace damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet and a plug that looks like the one shown in Fig. 12. A temporary adapter, which looks like the adapter illustrated in Fig. 13, may be used to connect this plug to a 2-pole receptacle, as shown in Fig. 13, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. **THIS ADAPTER IS NOT APPLICABLE IN CANADA.** The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box, as shown in Fig. 13.

**CAUTION:** IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE HAVE A CERTIFIED ELECTRICIAN CHECK THE RECEPTACLE.
STARTING AND STOPPING SAW

The switch (A) Fig. 14, is located on the motor. To turn the saw "ON" move the switch to the up position. To turn the saw "OFF" move the switch to the down position.

LOCKING SWITCH IN THE "OFF" POSITION

We suggest that when the saw is not in use, the switch be locked in the "OFF" position. This can be done by grasping the switch toggle (B) and pulling it out of the switch, as shown in Fig. 15. With the switch toggle (B) removed the switch will not operate. However, should the switch toggle be removed while the saw is running, it can be turned "OFF" once, but cannot be restarted without inserting the switch toggle (B).

TILTING THE TABLE

To tilt the table for angle sawing, loosen table tilting lock knob (A) Fig. 16, and tilt the table until the pointer (B) indicates the desired angle on the scale (C). Then tighten lock knob (A).

The table will tilt up to 45 degrees to the left. A positive stop is provided to insure that the table will always be returned 90 degrees to the blade. See section titled LEVELING THE TABLE.
LEVELING THE TABLE

Square cuts are made when the table surface is at 90 degrees to the blade. To check and adjust, proceed as follows:

1. Loosen table tilting lock knob (A) Fig. 17, and move the table all the way to the right. Then lock the table lock knob (A).

2. Place a small square (B) on the table surface with one end of the square against the blade, as shown in Fig. 17, and check to see if the table is at 90 degrees to the blade.

3. If an adjustment is necessary, loosen table tilting lock knob (A) Fig. 17, and turn set screw (C) until the set screw (C) contacts the frame when the table is at 90 degrees to the blade. Then tighten table lock knob (A) and adjust pointer (D) to point to the 0 degree mark on the scale.

ADJUSTING BLADE TENSION

Tension is applied to the blade by means of the blade tension knob (A) Fig. 18. Turning the knob clockwise will increase tension and turning it counterclockwise will decrease tension. Always turn the tension knob by hand. Never use any type of mechanical device or tool to turn tension knob. CAUTION: Excessive tension may cause blade breakage.
INSTALLING AND REPLACING BLADES

The 15" Scroll Saw is shipped with a pin-type blade assembled on the machine; however, blade holders are also supplied as standard equipment, which allow the operator the option of using flat-end blades. When it becomes necessary to install a blade, replace a broken blade, or change to a different type of blade, proceed as follows:

REMOVING AND INSTALLING PIN-TYPE BLADES

1. DISCONNECT THE MACHINE FROM THE POWER SOURCE.

2. Release blade tension.

3. Push down slightly on rocker arm assembly (B) Fig. 19, and lift top end of pin-type blade (A) out of upper rocker arm assembly (B).

4. Remove the other end of pin-type blade (A) Fig. 20, from lower rocker arm (C).

5. To install a blade, reverse the procedure.

6. Apply tension to the blade by turning the blade tension knob clockwise. CAUTION: DO NOT OVER TENSION THE BLADE.
INSTALLING OR REPLACING FLAT-END BLADES

1. DISCONNECT THE MACHINE FROM THE POWER SOURCE.

2. Release blade tension.

3. Insert blade holder (A) Fig. 21, into upper rocker arm (B), and tighten blade holder locking knob (C) to securely clamp blade holder (A) in position.

4. Using wrench (D) Fig. 22, loosen blade holder screw (E).

5. Insert flat-end blade (F) Fig. 23, into blade holder (A) and tighten blade holder screw (E). IMPORTANT: BLADE TEETH MUST POINT UPWARD.

6. Loosen blade holder locking knob (C) Fig. 24, and remove blade holder (A) and flat-end blade (F) from upper rocker arm (G).
7. Insert blade holder (A) Fig. 25, with blade attached, down through opening in table and into clip (H) in lower rocker arm (J) as shown. **NOTE: BLADE TEETH SHOULD BE POINTING DOWN.**

8. Assemble remaining blade holder (K) Fig. 26, into groove in upper rocker arm (G), and tighten blade holder locking knob (C) to securely hold blade holder (K) in position. Loosen blade holder screw (L).

9. Apply slight downward pressure on upper rocker arm (G) Fig. 26, and insert free end of flat-end blade (F) into blade holder (K) and tighten blade holder screw (L) with wrench.

10. **IMPORTANT: TURN BLADE HOLDER LOCKING KNOB (C) FIG. 27, COUNTERCLOCKWISE UNTIL THERE IS A DISTANCE OF 1/16" BETWEEN BOTTOM OF LOCK KNOB SCREW (M) FIG. 28 AND TOP OF BLADE HOLDER (K) AS SHOWN.**

11. Apply tension to the blade by turning the blade tension knob clockwise. **IMPORTANT: DO NOT OVER TENSION THE BLADE.**

12. **IMPORTANT: BLADE TEETH MUST BE POINTING DOWN DURING OPERATION.**
INSIDE CUTTING

Your scroll saw has the capability of performing inside cuts (where the blade must be threaded through a hole in the workpiece). Inside cuts are explained here depending on the type of blade and the size of the hole to be drilled through the waste piece of the inside cut.

INSIDE CUTTING WITH PIN-TYPE BLADES

1. MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.

2. Release blade tension.

3. Remove blade (A) Fig. 29, from upper rocker arm (B) and lower rocker arm.

4. Depending on the size of the scrap portion on the inside of the workpiece, drill a hole or holes in the scrap piece larger in diameter than the width of the blade.

5. Place the workpiece on the table with one of the drilled holes over the opening in the saw table and insert the blade (A) Fig. 30 (teeth pointing down) through the hole in the workpiece and through the opening in the table as shown in Fig. 30. Assemble the blade into the groove in the lower rocker arm.

6. Assemble the upper end of the pin-type blade (A) Fig. 31, into upper rocker arm (B), adjust blade tension and proceed to cut out the waste pieces.
INSIDE CUTTING WITH FLAT-END BLADES

There are two methods of doing inside cuts when using flat-end blades. Each method depends on the size of the hole to be drilled through the waste piece of the inside cut. Method One explains the procedure when the scrap portion of the inside cut allows you to drill a hole 13/16" or larger in diameter. Method Two explains the procedure when the scrap portion of the inside cut is smaller than 13/16" in diameter.

METHOD ONE

1. MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.

2. Release blade tension.

3. Loosen blade holder locking knob (A) Fig. 32, and remove upper and lower blade holders (B) and blade (C) as shown.

4. Drill a 13/16" diameter hole or larger in the scrap piece of the inside cut.

5. Place the workpiece on the table with one of the drilled holes over the opening in the saw table. Insert the lower blade holder (B) Fig. 33, down through the hole in the workpiece and through the opening in the table as shown. **NOTE:** Blade teeth must be pointing down. Assemble the lower blade holder into the clip in the lower rocker arm.

6. Assemble the upper blade holder (B) Fig. 34 into the upper rocker arm (D). Adjust blade tension and proceed to cut out the waste piece, as shown in Fig. 34.
METHOD TWO

1. MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.

2. Release blade tension.

3. Tighten blade holder locking knob (A) Fig. 35, to securely hold the upper blade holder (B) in upper arm (C). Using wrench, loosen blade holder screw and remove blade (E) from upper blade holder (B), as shown.

4. Drill a hole in the scrap piece of the inside cut, and thread blade (E) Fig. 36, through this hole.

5. Reassemble the blade (E) Fig. 37, into upper blade holder (B). Loosen blade holder locking knob (A), adjust blade tension and proceed to make the inside cut, as shown in Fig. 37.
PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of factory service centers and authorized service stations listed in your owner’s manual. To obtain additional information regarding your Delta quality product or to obtain parts, service or warranty assistance, please call or fax Delta’s toll-free ‘hotline’ number.

Delta maintains a modern, efficient Parts Distribution Center, maintaining an inventory of over 15,000 parts located in Memphis, Tennessee.

Highly qualified and experienced Customer Service Representatives are standing by to assist you on weekdays from 8:00 A.M. to 5:00 P.M. Memphis time.

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Delta Building Trades and Home Shop Machinery
Two Year Limited Warranty

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.